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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,272	11/09/2001	Janne U. Aaltonen	324-010609-US(PAR)	6834
2512	7590	03/31/2008		
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			EXAMINER NG, CHRISTINE Y	
			ART UNIT	PAPER NUMBER
			2616	
			MAIL DATE	DELIVERY MODE
			03/31/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/037,272	AALTONEN, JANNE U.	
	Examiner	Art Unit	
	CHRISTINE NG	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,721,565 to Ejzak et al in view of U.S. Patent No. 6,321,096 to Lautenschlager et al in view of U.S. Patent No. 6,081,510 to Valentine, and in further view of U.S. Publication No. 2003/0039237 to Forslow.

Referring to claims 1, 20, 22 and 24, Ejzak et al disclose in Figure 5 a method of transmitting messages from a mobile station (140e) in a telecommunication system comprising a first network offering circuit-switched services (circuit domain 120), a second network offering packet-switched services (packet domain 110). Refer to Column 14, lines 10-17. The method comprises the steps of:

Checking, by the mobile station (if mobile-assisted handover is used; Column 10, lines 3-7 and Column 11, lines 37-50), in response to the need to transmit at least one message, if the mobile station is attached to the second network. If mobile station 140e needs to send a call to land-side terminal 138, a call is established via control paths 570, 572, 574 and packet bearer paths 580, 582. Refer to Column 14, lines 18-29. This is only possible if the RF path between the terminal 140e and the base station 142

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of packet domain 110 is strong enough, as measured by the terminal. Refer to Column 11, lines 37-50.

Transmitting said at least one message to the second network in response to the mobile station being attached to the second network. A stable call is formed between mobile station 140e and land-side terminal 138. Refer to Column 14, lines 18-29.

In response to failure to transmit the message via the second network, transmitting said at least one message to the first network. If the RF path between the terminal and base station is not strong enough, handover to the circuit domain 120 is required. Refer to Column 11, lines 37-50; and Column 14, lines 30-64.

Ejzak et al do not specifically disclose that checking RF path quality to determine handover is the same as checking if the mobile station is attached to the second network and transmitting to the second network.

Lautenschlager et al disclose in Figure 1 a similar situation of handover between a public telephone network PSN and a mobile network MN. For example, if the field strength of the radio network base station (connected to the PSN) falls below a threshold, a control unit (Figure 2, CONTR) in the mobile station switches over to the MN. In conjunction with the switch-over, the control unit deactivates the communication unit KOM1 (connected to the PSN) and activates the communication unit KOM2 (connected to the MN). All switch-over processes require that the mobile unit detach itself from the old network and attach itself to the new network, as shown in Figures 3a and 3b. Refer to Column 5, line 12 to Column 7, line 13. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include

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that checking RF path quality to determine handover is the same as checking if the mobile station is attached to the second network and transmitting to the second network. One would be motivated to do so since the mobile station cannot transmit to a network unless it is attached to that network. A mobile station can become detached from a network if the transmission quality of the network is poor and a handoff is required. The status of a mobile terminal "...in the home data base HLR from "attached" to "detached" causes a switch-over of the routing on the network-side" (Column 8, lines 9-11).

Ejzak et al also do not disclose that an error message is received from the second network.

Valentine discloses in Figures 1 and 2 a handover between a source BTS 121 and a target BTS 123. Before handoff occurs, the source modem/IWU 113 sends a message to far-end modem 101 indicating that there are adverse radio-link conditions so that the far-end modem 101 ceases receiving/transmitting data. After handoff, far-end modem 101 continues receiving/transmitting data. Refer to Column 4, lines 10-21. Furthermore, adverse radio-link conditions can be caused by high frame error rate or bit error rate. Refer to Column 3, lines 1-8. Far-end modem 101 thus stops transmitting messages since a message indicating adverse radio-link conditions (error message) has been received. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that an error message is received from the second network. One would be motivated to do so in order to notify the mobile station that the link quality is poor and the messages are not being received correctly.

Ejzak et al also do not disclose that the messages are *text-based* messages.

Forslow discloses in Figure 2 a mobile station 16 that can choose between transmission of data through a circuit-switched network 35 or a packet-switched network 51. The data can include applications such as short message exchange, downloaded graphics files from a website, and email. Refer to Sections 0003, 0015 and 0022. Furthermore, Ejzak et al disclose in Figure 5 that the information transfer includes "multimedia variants" (Column 7, lines 11-16), which can include text and graphics. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the messages are *text-based* messages. One would be motivated to do so in order to make system more flexible by supporting short messages, an increasingly popular form of communication.

Referring to claims 7, 15 and 19, refer to the rejection of claim 1. Furthermore, Ejzak et al do not disclose that the mobile station comprises the means for performing the method of claim 1.

Lautenschlager et al disclose in Figure 1 a similar situation of handover between a public telephone network PSN and a mobile network MN. For example, if the field strength of the radio network base station (connected to the PSN) falls below a threshold, a control unit (Figure 2, CONTR) in the mobile station switches over to the MN. In conjunction with the switch-over, the CONTR deactivates the communication unit KOM1 (connected to the PSN) and activates the communication unit KOM2 (connected to the MN). The steps are performed by the CONTR in the mobile unit. Refer to Column 5, lines 12-43. Therefore, it would have been obvious to one of

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ordinary skill in the art at the time the invention was made to include that the mobile station comprises the means for performing the method of claim 1. One would be motivated to do so in order to allow mobile assisted handoff.

Referring to claims 2 and 8, Ejzak et al disclose in Figure 5 wherein said message is transmitted via the first network in response to non-attachment to the second network. If the RF path between the terminal 140e and base station 142 of packet domain 110 is not strong enough, the terminal has moved too far away from the base station. Handover to the circuit domain 120 is then required. Refer to Column 11, lines 37-50; and Column 14, lines 30-64.

Referring to claim 3, Ejzak et al disclose in Figure 9 that the method further comprises the steps of:

Suspending packet-switched service (918, 920, 922) in the second network before transmitting said message to the first network. Refer to Column 14, lines 53-64.

Continuing offering the packet-switched service after transmission of said message at the request of the first network or the mobile station. The mobile station can handover the call back to the packet domain 120 if the RF path between the mobile station 140e and the circuit domain 110 fails. The mobile station reports measurements of the signal strength of transmissions from nearby base stations. Refer to Column 11, lines 37-50.

Referring to claim 4, Ejzak et al disclose in Figure 5 that the first network is a GSM network and the second network is a GPRS network. Refer to Column 7, lines 49-64; and Column 8, lines 19-40.

Referring to claims 5, 21 and 23, Ejzak et al do not disclose that said message is a text-based short message of a short message service SMS or a picture message.

Forslow discloses in Figure 2 a mobile station 16 that can choose between transmission of data through a circuit-switched network 35 or a packet-switched network 51. The data can include applications such as short message exchange, downloaded graphics files from a website, and email. Refer to Sections 0003, 0015 and 0022. Furthermore, Ejzak et al disclose in Figure 5 that the information transfer includes "multimedia variants" (Column 7, lines 11-16), which can include text and graphics. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that said message is a text-based short message of a short message service SMS or a picture message. One would be motivated to do so in order to make system more flexible by supporting short messages, an increasingly popular form of communication.

Referring to claims 6 and 9, Ejzak et al do not disclose that the user of the mobile station is offered the option to choose whether the messages are transmitted via the first network or the second network, and the messages are transmitted in accordance with the user's choice.

Forslow discloses in Figure 2 a HLR 42 that stores subscription records including subscribed quality of service profiles and parameters. Based on the quality of service for a specific application of flow, an optimal one of a circuit-switch and a packet-switched bearer is selected to carry that specific application flow. A common access server of a gateway node permits a mobile station to establish communications with an

external network entity using the optimal bearer. Refer to Sections 0029, 0050, and 0054. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the user of the mobile station is offered the option to choose whether the messages are transmitted via the first network of the second network, and the messages are transmitted in accordance with the user's choice. One would be motivated to do so in order to make the system more flexible by allowing the user to choose which network to transmit data through, depending on the transmission characteristics and priority level of the data.

Referring to claim 10, refer to the rejection of claim 4 and claim 5.

Referring to claims 11 and 12, Ejzak et al do not disclose that in said step of transmitting at least one message to the second network, said at least one message is transmitted via a short message service (SMS) form of transmission.

Forslow discloses in Figure 2 a mobile station 16 that can choose between transmission of data through a circuit-switched network 35 or a packet-switched network 51. The data can include applications such as short message exchange. Refer to Sections 0003, 0015 and 0022. Furthermore, Ejzak et al disclose in Figure 5 that the information transfer includes "multimedia variants" (Column 7, lines 11-16), which can include text and graphics. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that in said step of transmitting at least one message to the second network, said at least one message is transmitted via a short message service (SMS) form of transmission. One would be motivated to do

so in order to make system more flexible by supporting short messages, an increasingly popular form of communication.

Referring to claims 13 and 14, refer to the rejection of claim 4 and claim 5. Ejzak et al disclose that the message is transmitted to the first network offering circuit-switched services in response to a failure via the GPRS network. Refer also to the rejection of claims 1, 20, 22 and 24.

Referring to claim 16, refer to the rejection of claims 1, 20, 22 and 24; and claim 5.

Referring to claims 17 and 18, refer to the rejection of claims 7, 15 and 19; and claims 11 and 12.

Response to Arguments

3. Applicant's arguments filed January 15, 2008 have been fully considered but they are not persuasive.

Ejzak et al disclose in Figure 5 a method of transmitting messages between a packet domain 110 and a circuit domain 120. The mobile station will be transmitting packets to the packet domain 110 until it loses contact with the packet domain 110 (or, becomes detached from the network due to poor RF link quality). Communication is only possible if the RF path between the terminal 140e and the base station 142 of packet domain 110 is strong enough, as measured by the terminal. If the RF path between the terminal and base station is not strong enough, the packet transmission via the packet domain 110 will fail, and handover to the circuit domain 120 will be initiated. Refer to Column 11, lines 37-50; and Column 14, lines 18-64.

The Lautenschlager et al reference is used to show that if a mobile station experiences poor transmission quality with a network, the mobile station becomes detached from a network. The status of a mobile terminal "...in the home data base HLR from "attached" to "detached" causes a switch-over of the routing on the network-side" (Column 8, lines 9-11). Lautenschlager et al is combinable with Ejzak et al since they both disclose handover between two networks. Lautenschlager et al disclose in Figure 1 handover between a public telephone network PSN and a mobile network MN. If the field strength of the radio network base station (connected to the PSN) falls below a threshold, a control unit (Figure 2, CONTR) in the mobile station switches over to the MN. In conjunction with the switch-over, the control unit deactivates the communication unit KOM1 (connected to the PSN) and activates the communication unit KOM2 (connected to the MN). All switch-over processes require that the mobile unit detach itself from the old network and attach itself to the new network, as shown in Figures 3a and 3b. Refer to Column 5, line 12 to Column 7, line 13. Therefore, a mobile station checks if it is attached to a network when it is checking for the radio link quality. If the link quality is poor, the mobile station becomes detached from the network. Also, Ejzak et al disclose "mobile-assisted handover", so the mobile terminal initiates a handover by continuously measuring the signal strength with the base station, similar to the system of Lautenschlager et al. Although Ejzak et al disclose that a stable call is maintained between the mobile station and base station, the mobile station can still move away from the base station and lose contact. Once the RF path deteriorates, the mobile

station is no longer in a stable communication with the base station and has become detached, which requires a handover.

Referring to the argument that the specification defines “attachment” as “the formation of a mobility management context for the MS” (page 11, lines 11-28): The claims do not claim this limitation, so “attachment” can read on a mobile station being inside a coverage area, as defined by RF field strength.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE NG whose telephone number is (571)272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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C. Ng
March 18, 2008
/Huy D. Vu/
Supervisory Patent Examiner, Art Unit 2616